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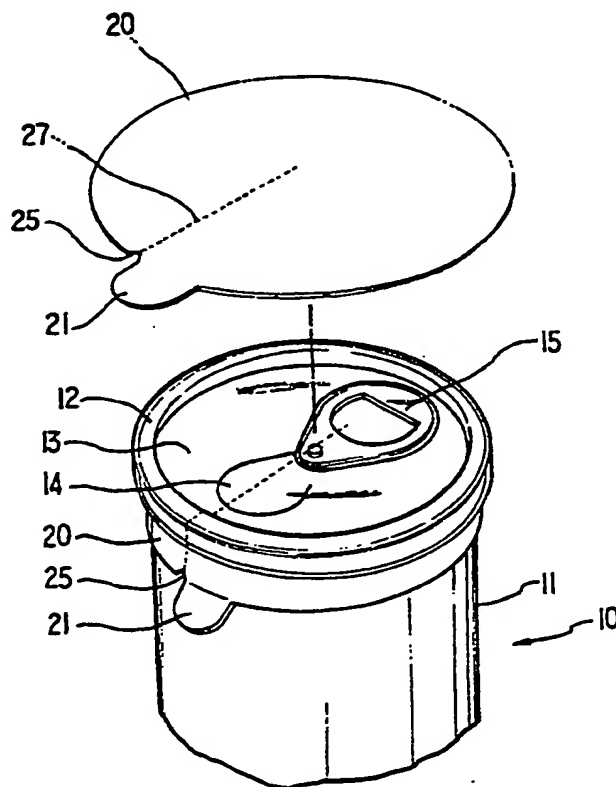
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<p>(21) International Application Number: <b>PCT/KR94/00031</b> (22) International Filing Date: 13 April 1994 (13.04.94) (71)(72) Applicant and Inventor: <b>JUNG, Young, Chul [KR/KR];</b> 32/505, Gongmuwon-Apartment, Dongbuichon-dong, Yongsan-gu, Seoul 140-031 (KR). (74) Agent: <b>LEE, Young, Wha; 904 Poonglim Building, 823,</b> Yeogsam-dong, Gangnam-gu, Seoul 135-080 (KR).</p>		<p>(81) Designated States: AU, BR, CA, CN, JP, US, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).  <b>Published</b> <i>With international search report.</i></p>

(54) Title: BEVERAGE CAN WITH SANITARY TOP COVER

(57) Abstract

A beverage can sealed up at its top section by a sanitary top cover for protection of the top section from contamination. The beverage can comprises a can body, a lid plate having an opening part for forming a beverage discharging opening and a tang seaming the lid plate and a top end of the can body together. The top section of the can sealed up by the sanitary top cover includes the lid plate, the tang and a top section of the can body. The sanitary top cover is made of a shrinkable film and thermally sticks to the top section of the can and has a flap section at its periphery for provision of a pulling handle. The top cover is provided with not only a tearing notch at a side of the flap section but also a tearing line extending inward from the tearing notch. The flap section of the sanitary top cover is separated from an outer surface of the can. With the sanitary top cover, there is no hygienic problem even when drinking the canned beverage while contacting the lips to about the beverage discharging opening of the can.



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can 10, the shrinkable film cover 20 is heated at a predetermined temperature and thermally shrinks to tightly stick to the top section of the can 10. In this case, it should be understood that the flap section 21 of the top cover 20 does not stick to the top section of the can body 11.

When drinking the canned beverage, the flap section 21 of the sanitary top cover 20 is pulled up in order to make the top cover 20 torn and removed from the top section of the can 10. Here, in order to facilitate the tearing and removing of the top cover 20, this top cover 20 is preferably provided with not only an acute tearing notch 25 at a side of the flap section 21 but also a tearing line 27, such as a perforated line, extending radially inward from the acute notch 25.

Since the top section of the can 10 of this invention is sealed up by the sanitary top cover 20 made of the shrinkable film as described above, the top section of the can 10, particularly the lid plate 13 including the opening part 14, can be reliably protected from contamination by contaminants such as dirt during its circulation, thus to achieve a desired good sanitary condition. When drinking the canned beverage, the flap section 21 of the sanitary top cover 20 is pulled up so that the pulling force concentrates on the acute notch 25 and starts to tear the cover 20 at the notch 25. When the flap section 21 is continuously pulled up, the top cover 20 is torn along the tearing line 27 extending radially inward from the notch 25, thus to be easily removed from the top section of the can 10. After removing the top cover 20 from the top section of the can 10, the handle ring 15 of the lid plate 13 is conventionally levered, thus to cut the opening part 14 off along the weakened cutting line of the lid plate 13 and to provide the opening through which the beverage are discharged from the can 10. At this time, the top section of the can 10 about the beverage discharging opening has been kept clean thanks for the sanitary top cover 20 which sealed up the

## BEVERAGE CAN WITH SANITARY TOP COVER

## BACKGROUND OF THE INVENTION

## 5 Field of the Invention

The present invention relates in general to a can containing beverages such as alcoholic beverages and cooling beverages therein and forming a beverage discharging opening by removing an opening part from its lid plate and, more particularly, to a beverage can with means for protection of  
10 its top section from contamination such as by dirt during its circulation.

## 15 Description of the Prior Art

Conventionally, varieties of cans for containing liquid foods such as alcoholic beverages and cooling beverages are produced using a thin steel plate or an aluminum alloy plate.

The lid plate of the can is provided with an opening part which will be pulled apart from the lid plate for provision of a beverage discharging opening on the lid before drinking the canned beverage. The opening part of the lid plate is defined by a weakened cutting line and rivetted to a handle ring at an end section thereof. Hence,  
20 in order to pull the opening part and partially open the lid plate for drinking the canned beverage, the handle ring is pulled in order to cut the opening part off along the weakened cutting line and to provide the beverage discharging opening.

However, the cans for beverages always expose their top sections including the opening parts to the environment during their transportation and exhibition while being vertically heaped up, so that the top sections are apt to be contaminated by contaminants such as dirt. In this regard,  
25 a conventional can has a hygienic problem in that part of the contaminants of the top section is introduced into the human body along with the canned beverages when drinking the  
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beverages while contacting the lips to about the beverage discharging opening of the lid plate. In order to prevent introduction of contaminants into the human body when drinking the beverages, the top section of the can about the opening part should be cleaned such as by a paper before separation of the opening part or before drinking of the canned beverages. In addition, the hygienic problem of the can becomes worse by the fact that the can is apt to become hand-stained on its top section when the can is handled and the opening part is cut off along the weakened cutting line before drinking the canned beverage.

The hygienic problem caused by the contaminants on the top section of the can may be overcome by use of straw. However, use of straw also introduces somewhat inconvenience to the user.

#### SUMMARY OF THE INVENTION

It is, therefore, an object of the present invention to provide a beverage can in which the aforementioned problems can be overcome and which is sealed up at its top section, including the can lid, by a sanitary top cover for protection of its top section from contamination and achieving a desired good sanitary condition, the sanitary top cover being made of a shrinkable film and easily torn and removed from the top section of the can when drinking the canned beverage.

In order to accomplish the above object, a beverage can having an opening part on its lid plate in accordance with a preferred embodiment of the present invention comprises a sanitary top cover made of a shrinkable film and sealing up a top section of the can including the lid plate, a tang and a top section of a can body, the sanitary top cover having a flap section at its periphery for provision of a pulling handle for tearing and removing the sanitary top cover from the top section of the can.

To facilitate tearing and removing of the sanitary top

cover, this top cover is preferably provided with not only a tearing notch at a side of the flap section but also a tearing line extending inward from the tearing notch.

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#### BRIEF DESCRIPTION OF THE DRAWINGS

The above and other objects, features and other advantages of the present invention will be more clearly understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

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Fig. 1 is a partially perspective view of a beverage can with a sanitary top cover in accordance with a preferred embodiment of the present invention; and

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Fig. 2 is a sectional view of the can with the sanitary top cover of Fig. 1.

#### DESCRIPTION OF THE PREFERRED EMBODIMENTS

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Referring to the drawings, there is shown a beverage can with a sanitary top cover in accordance with a preferred embodiment of the present invention. The can 10 comprises a can body 11 which is lidded by a lid plate 13 at its upper top. The can body 11 and the lid plate 13 are tightly sealed together at a circular tang 12. The lid plate 13 is also weakened at a predetermined section by a cutting line, thus to form an opening part 14 inside the cutting line, which opening part 14 is in turn rivetted to a handle ring 15 at an end section thereof. When drinking the canned beverages, the handle ring 15 is levered to cut the opening part 14 off along the weakened cutting line and to provide an opening through which the canned beverage is discharged from the can 10. The can 10 is also sealed up on its top section, including the lid plate 13, the opening part 14, the handle ring 15, the tang 12 and a top section of the can body 11, by the sanitary top cover 20 made of a shrinkable film. The sanitary top cover 20 has a flap section 21 at its periphery. In order to seal up the top section of the

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top section of the can 10 but is now removed from the top section. In this regard, there is no hygienic problem even when drinking the beverage while contacting the lips to about the beverage discharging opening of the can 10.

5 As described above, a beverage can of the present invention is sealed up at its top section including the opening part by a sanitary top cover made of a shrinkable film, thus to protect its top section from contamination by contaminants such as dirt during its circulation. With the  
10 sanitary top cover sealing up the top section of the can, there is no hygienic problem even when drinking the canned beverage while contacting the lips to about the opening of the can.

15 Although the preferred embodiments of the present invention have been disclosed for illustrative purposes, those skilled in the art will appreciate that various modifications, additions and substitutions are possible, without departing from the scope and spirit of the invention as disclosed in the accompanying claims.

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## WHAT IS CLAIMED IS:

1. A beverage can comprising a can body, a lid plate having an opening part for forming a beverage discharging opening and a tang seaming said lid plate and a top end of said can body together, further comprising:

a sanitary top cover sealing up a top section of said can including said lid plate, said tang and a top section of said can body, said sanitary top cover thermally sticking to said top section of the can and having a flap section at its periphery for provision of a pulling handle for removing said sanitary top cover from the top section of the can.

2. The beverage can according to claim 1, wherein said sanitary top cover is provided with not only a tearing notch at a side of said flap section but also a tearing line extending inward from said tearing notch.

3. The beverage can according to claim 1, wherein said flap section of the sanitary top cover is separated from an outer surface of the can.

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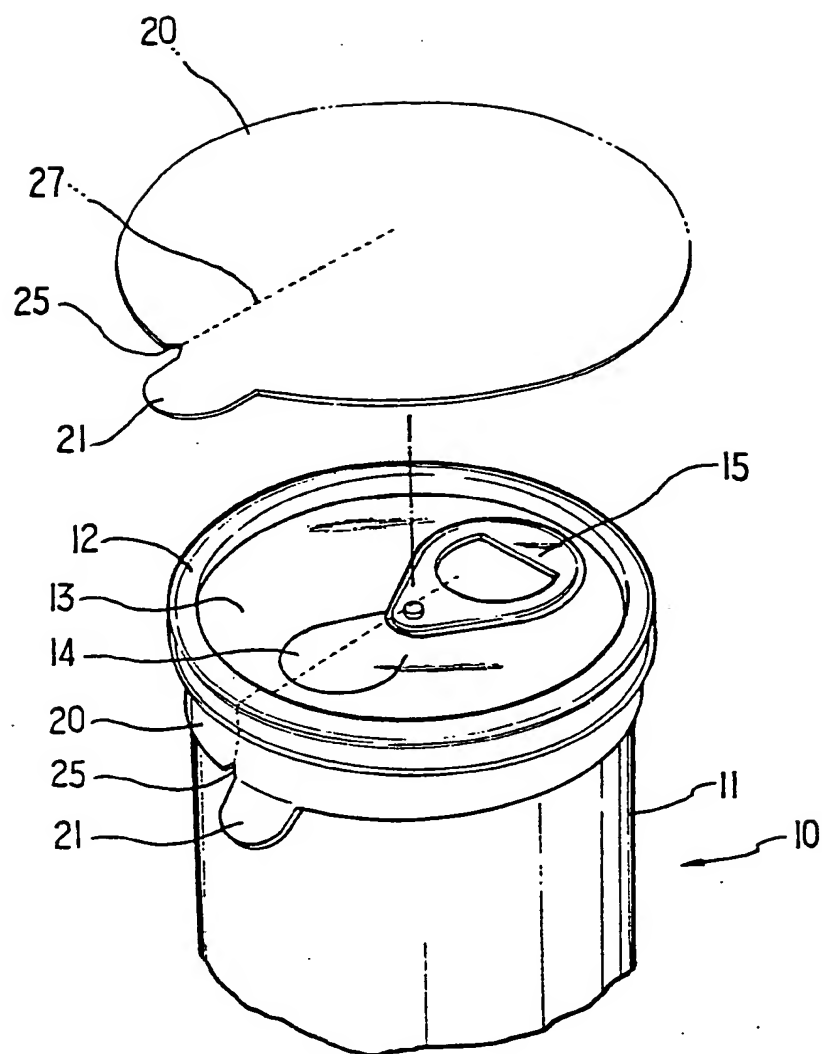


FIG. 1



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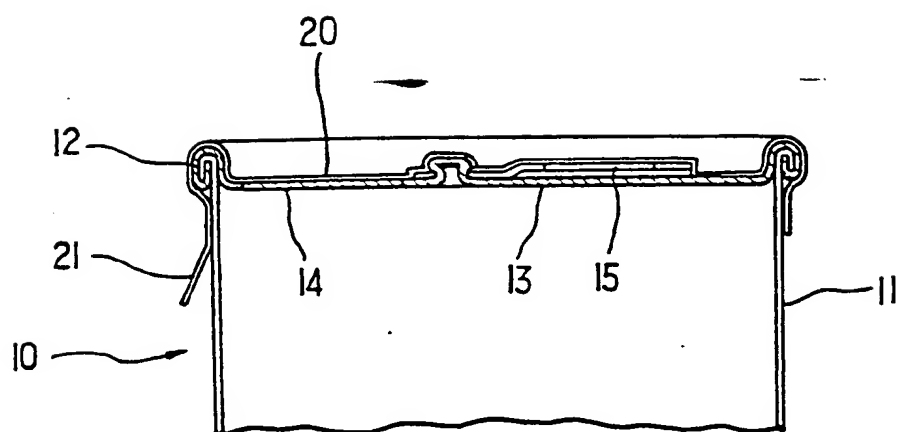


FIG. 2

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 94/00031

## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>6</sup>: B 65 D 17/34, 65/28

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC<sup>6</sup>: B 65 D 17/00, 25/00, 41/00, 53/00, 65/00, 71/00, 77/00, 85/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

IFIPAT, JAPIO, WPIL

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE, A1, 3 907 380 (MAI) 13 September 1990 (13.09.90), totality, especially claims 1-9; fig. 1-3.	1-3
A	EP, A1, 0 526 142 (OKURA INDUSTRIAL CO. LTD) 03 February 1993 (03.02.93), totality. -----	1-3

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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"Z" document member of the same patent family

Date of the actual completion of the international search  
29 June 1994 (29.06.94)

Date of mailing of the international search report  
11 July 1994 (11.07.94)

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**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
PCT/KR 94/00031

In Recherchenbericht angeführtes Patentdokument Patent document cited in search report Document de brevet cité dans le rapport de recherche	Datum der Veröffentlichung Publication date Date de publication	Mitglied(er) der Patentfamilie Patent family member(s) Membre(s) de la famille de brevets	Datum der Veröffentlichung Publication date Date de publication
DE A1 3907380	13-09-90	keine - none - rien	
EP A1 526142		CA AA 2074683 US A 5240111	31-01-93 31-08-93

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